

**RECEIVED  
CENTRAL FAX CENTER**

**NOV 05 2007**

Atty Docket No. 020048-002000US

PTO FAX NO.: 1-571-273-8300

ATTENTION: Examiner Jyoti Nagpaul

Group Art Unit 1743

**OFFICIAL COMMUNICATION  
FOR THE PERSONAL ATTENTION OF  
EXAMINER Jyoti Nagpaul**

**CERTIFICATION OF FACSIMILE TRANSMISSION**

I hereby certify that the following documents in re Application of Douglas B. Dority, Application No. 10/084,409, filed February 25, 2002 for FLUID PROCESSING AND CONTROL are being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Documents Attached

1. APPELLANTS' REPLY BRIEF UNDER 37 CFR §41.41
2. REQUEST FOR ORAL HEARING BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Number of pages being transmitted, including this page: 9

Dated: November 5, 2007

  
Mary Green

**PLEASE CONFIRM RECEIPT OF THIS PAPER BY  
RETURN FACSIMILE AT (415) 576-0300**

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, CA 94111-3834  
Telephone: 415-576-0200  
Fax: 415-576-0300  
3774

61200557 v1

RECEIVED  
CENTRAL FAX CENTER

002/009

NOV 05 2007

I hereby certify that this correspondence is being facsimile  
transmitted to the United States Patent and Trademark Office,  
Fax No. 1-571-273-8300 on November 5, 2007

PATENT  
Attorney Docket No. 020048-002000US  
Client Ref. No.

TOWNSEND and TOWNSEND and CREW LLP

By 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Douglas B. Dority

Application No.: 10/084,409

Filed: February 25, 2002

For: FLUID PROCESSING AND  
CONTROL

Customer No.: 20350

Confirmation No. 8156

Examiner: Jyoti Nagpaul

Technology Center/Art Unit: 1743

APPELLANTS' REPLY BRIEF UNDER  
37 CFR §41.41

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This brief is filed pursuant to 37 C.F.R. §41.41, in response to the Examiner's  
Answer mailed September 5, 2007. A Request for an Oral Hearing is filed herewith as a separate  
paper under 37 C.F.R. §41.47.

Douglas B. Dority  
Appl. No. 10/084,409  
Page 2

PATENT  
Attorney Docket No. 020048-002000US

## I. ANTICIPATION REJECTION

Claims 1, 12, 26-27, 30-32, 34-37, 42-43, and 46 stand rejected under 35 U.S.C. §102(b) for alleged anticipation by Gundelfinger (U.S. Pat. No. 4,068,528). Appellant respectfully traverses this rejection and argues that the rejection is improper, because Gundelfinger fails to teach, either expressly or inherently, all of the elements of the pending claims. Specifically, Gundelfinger does not teach:

- (1) a housing having a plurality of chambers, and
- (2) a valve body including a fluid processing region continuously coupled fluidically with a fluid displacement region.

Both elements are presently recited in independent claims 1, 26, and 46.

### A. Gundelfinger Does Not Teach a Plurality of Chambers

Independent claims 1, 24, and 46 of the invention disclose a fluid control and processing system comprising a housing having a plurality of chambers. The Examiner maintains that the structural features F1-F6, in Gundelfinger, meets the requirement of a plurality of chambers as recited in independent claims 1, 26, and 46. For the reasons of record and those emphasized below, Applicants disagree.

Nowhere does Gundelfinger characterize the structural features (F1 to F6) as a plurality of chambers. Rather, Gundelfinger repeatedly refers to F1-F6 as "internal flow paths," not as a plurality of chambers as alleged by the Examiner. *See*, page 3, item 1, of the Examiner's Answer mailed September 5, 2007. Indeed, Gundelfinger in describing the external fitting ports in the valve's stator, expressly states that "[T]hese external ports are respectively in communication with internal flow passages F1-F6 in the stator" (emphasis added). *See*, Gundelfinger, Col. 3, lines 9-11. Furthermore, Gundelfinger states that "...paths F1-F6 and Fc are very small holes, e.g., 0.010 inch in diameter" in the stator. *See*, Col. 9, lines 8-9. Moreover, Gundelfinger states that flow paths F5 and F6 provide a flow path from external port P5 to port P6, and that F1 and F2 provide a flow path between external ports P1 and P2 (*see*, Gundelfinger, Col. 3, lines 18-25) and, F3 and F4 provide a flow path between ports P3 and P4 (*see*, Gundelfinger, col. 3, lines 63-64). Nowhere does Gundelfinger teach that the very small holes in

Douglas B. Dority  
Appl. No. 10/084,409  
Page 3

PATENT  
Attorney Docket No. 020048-002000US

the stator (F1-F6) that serve as flow paths are a plurality of chambers as alleged by the Examiner. Applicant respectfully disagrees with the Examiner's contention that very small holes in a stator (0.010 inches in diameter) that serve solely as a flow path connecting a series of ports, can be construed as a "housing having a plurality of chambers" as in the present application (*see, e.g.,* Figure 1, reference numeral (13) of the present invention).

Specifically, the Examiner alleges that the flow paths in Fig. 10 of Gundelfinger are equivalent to the Appellant's plurality of chambers. *See*, bottom of page 7, of the Examiner's Answer. Applicant's emphasize that the "flow paths" F1-F6 are not the same as the "plurality of chambers" in the present invention because fluid merely passes through the flow paths F1-F6, while fluid flows into (or out of) the chambers in the present invention. A chamber is not a flow path. A chamber holds reagents for processing or collects fluids after processing, while a flow path merely conducts fluids between different components of the device.

This is particularly evident with regard to chamber 64, in Figure 9bb of the present invention, which the Examiner states is equivalent to the flow paths of Gundelfinger (*see*, bottom of page 7 of the Examiner's Answer). Chamber (64) is a waste chamber and fluid passes through the fluid processing region (30) through an external port (46) to the waste chamber (64). *See*, page 9, lines 9-12, of the specification. The flow paths (F1-F6) of Gundelfinger may be analogous to the fluid flow channels of the present invention, for example, the channels between the fluid processing region (30) and the external port (46). F1-F6, however, are not equivalent to the plurality of chambers as recited in the independent claims 1, 26 and 46 of the present invention.

**B. Gundelfinger Does Not Teach a Valve Body Including a Fluid Processing Region**

Independent claims 1, 26, and 46 disclose a device comprising a valve body including a fluid processing region continuously coupled fluidically with a fluid displacement region in the valve body. Gundelfinger does not disclose a device with a valve body including a fluid processing region as recited in independent claims 1, 26 and 46, as alleged by the Examiner. Specifically, the Examiner alleges that the sample loop of Gundelfinger is equivalent

Douglas B. Dority  
Appl. No. 10/084,409  
Page 4

PATENT  
Attorney Docket No. 020048-002000US

to the fluid processing region as presently recited in independent claims 1, 26, and 46. For the reasons of record and those emphasized below, Applicants disagree.

Gundelfinger discloses "a two position rotary valve with which a restrictor loop and a sample loop are associated" (emphasis added). See, Gundelfinger, col 1, lines 63-64. Indeed, even Gundelfinger acknowledges that the loops relied on by the Examiner are merely associated with the valve, and are not part of the valve as in the present invention. The sample loop (30) in Gundelfinger, which the Examiner alleges is equivalent to the fluid processing region of the present invention, is formed by a piece of tubing that is external to the valve. Specifically, Gundelfinger teaches that "[A]ssociated with valve (10) is a second external coiled tubing, defining a sample loop." See, Gundelfinger, col. 3 lines 53-55 (emphasis added). The tubing comprising the sample loop of Gundelfinger merely holds a sample aliquot before the aliquot is injected into a separate liquid chromatographic column.

The sample loop (30) of Gundelfinger fails to anticipate the applicant's claimed structure for at least two reasons. First, the sample loop is not a "fluid processing region" as defined by the applicant's specification. Specifically, "fluid processing region" is defined in the specification as:

a region in which a fluid is subject to processing including, without limitation, chemical, optical, electrical, mechanical, thermal, or acoustical processing"

See, page 6, lines 32-34, of the specification.

The sample loop (30) in Gundelfinger is simply a piece of tubing that holds a sample aliquot for a period of time before the aliquot is injected into a separate chromatographic column. Gundelfinger does not teach that the sample held within the sample loop is subject to chemical, optical, electrical, mechanical, thermal or acoustical processing, as defined in the instant invention. Thus, the sample loop is not a fluid processing region as defined by the present specification.

Second, even if the sample loop (30) of Gundelfinger were considered equivalent to the fluid processing region of the instant application, which the applicants contest,

Douglas B. Dority  
Appl. No. 10/084,409  
Page 5

PATENT  
Attorney Docket No. 020048-002000US

Gundelfinger still would not anticipate the present invention because the sample loop is not included in the valve body as recited in claims 1, 26 and 46. Specifically, the independent claims state: "...a valve body including a fluid processing region..." (emphasis added). Gundelfinger does not teach or suggest a fluid processing region included in the valve body. Rather, Gundelfinger teaches a piece of tubing (*i.e.* the sample loop) that is merely associated with, and external to the valve. For example, Gundelfinger explicitly teaches that "[T]he sample loop 30, which is external to the valve..." (*see*, col. 6, line 31, emphasis added); "...a sample loop which is externally connected to the valve..." (*see*, abstract, emphasis added); and "...the valve comprising...an external conduit defining a sample loop..." (*see* Col. 14, lines 25-34, emphasis added). Thus, Gundelfinger does not teach or suggest a valve body including a fluid processing region that is continuously coupled fluidically with a fluid displacement region as explicitly recited in independent claims 1, 26, and 46 of the Applicant's invention. Because Gundelfinger does not teach or suggest a valve body including a fluid processing region as recited in the independent claims 1, 26, and 46, Gundelfinger does not teach all of the elements of the independent claims, and therefore Gundelfinger cannot anticipate the present invention.

As such, the anticipation rejection should not be sustained even without any rebuttal by the applicant.

## II. OBVIOUSNESS REJECTION

### A. Sakai Does Not Cure the Defects in Gundelfinger

Dependent claims 2-11, 13-16, 28-29, 33 and 47-48 are rejected under 35 U.S.C. §103(a) as being obvious in light of Gundelfinger (U.S. Pat. No. 4,068,528) in view of Sakai (U.S. Pat. No. 4,937,048). Appellant respectfully traverses the rejection and argues that the rejection is improper.

In addition to the arguments already presented in Appellant's previous responses and the Appeal Brief, Appellant reemphasizes that Gundelfinger, as discussed above does not teach all of the elements of independent claims 1, 26, and 46, and that Sakai does not cure the defects in Gundelfinger. Because Gundelfinger, neither alone nor combined with Sakai, does not teach or suggest all of the elements of the independent claims, the independent claims are

Douglas B. Dority  
Appl. No. 10/084,409  
Page 6

PATENT  
Attorney Docket No. 020048-002000US

patentable and non-obvious over the cited references. The dependent claims include all of the elements of the independent claim from which they depend. Therefore, the rejected claims are patentable and not obvious over the cited references.

Accordingly, Appellant respectfully contends that the obviousness rejection is improper and should not be sustained.

**B. Lucerf Does Not Cure the Defects in Gundelfinger**

Dependent claims 38-41 are rejected under 35 U.S.C. §103(a) as being obvious in light of Gundelfinger (U.S. Pat. No. 4,068,528) in view of Lucerf (U.S. Pat. No. 4,705,059). Appellant respectfully traverses the rejection and argues that the rejection is improper.

In addition to the arguments already presented in Appellant's previous responses and the Appeal Brief, Appellant wishes to reemphasize that Gundelfinger does not teach all of the elements of independent claim 26 and Lucerf does not cure the defects in Gundelfinger. Because Gundelfinger, neither alone nor combined with Lucerf, does not teach or suggest all of the elements of the independent claim 26, claim 26 is patentable and non-obvious over the cited references. The dependent claims, 38-41, include all of the elements of the independent claim 26 from which they depend. Therefore, the rejected claims, 38-41, are patentable and not obvious over the cited references.

Accordingly, Appellant respectfully contends that the obviousness rejection is improper and should not be sustained.

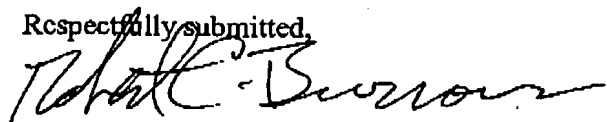
Douglas B. Dority  
Appl. No. 10/084,409  
Page 7

PATENT  
Attorney Docket No. 020048-002000US

### III. CONCLUSION

In view of the foregoing, Appellant believes that the anticipation rejection and obviousness rejections are improper and thus respectfully requests reversal of these rejections.

Respectfully submitted,



Robert C. Burrows, Ph.D.  
Reg. No. 61,039

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 650-326-2400  
Fax: 650-326-2422  
61197707 v1